



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/756,866	01/13/2004	Mark A. Jutras	P/144-328	3389
7590 11/12/2004				
OSTROLENK, FABER, GERB & SOFFEN, LLP				
1180 Avenue of the Americas				
New York, NY 10036-8403				
		EXAMINER		
		PATEL, RAJNIKANT B		
		ART UNIT		
		PAPER NUMBER		
		2838		

DATE MAILED: 11/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/756,866

Applicant(s)

JUTRAS ET AL.

Examiner

Rajnikant B Patel

Art Unit

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21, 23-37, 39, 40, 43-47 and 49-63 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21, 23-37, 39-40, 43-47 and 49-63 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 17 September 2004 have been fully considered but they are not persuasive.

Applicant argument regarding claim 1, Cross et al. does not use flyback converter therein to provide gate drive voltage, examiner like to point out figure 3, of Cross et al. clearly shows that output of flyback transformer controlling the gate of the switch 1a and 1b (dotted line). In regarding claims 2-4, Pilukaitis et al. clearly disclose self oscillating flyback converter (column 2, line 10-15). Similarly Majid et al. also disclose claimed subject matters including fault protection, ON/OFF switching, voltage divider, comparator and Majid et al. also disclose amended subject matters such as If any fault condition persist the switching of the switching elements is discontinued (Abstract, line 1-10).

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

Art Unit: 2838

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Cross et al. (U.S. Patent # 4,745,538).

Cross et al.'s figure 3 discloses claimed subject matters, including a switch mode power supply (abstract line 1), and flyback converter (Abstract line 2-5).

3. Claim 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Pilukaitis et al. (U. S. Patent # 4,903,182).

Pilukaitis et al.' s figure 2, discloses all claimed subject matters, a flyback converter, self oscillating converter (Abstract, line 1-10 and column 2-6, line 1-65).

4. Claims 23-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Williamson (U. S. Patent # 5,513,088).

Williamson disclose claimed invention a flyback converter (figure 1, and Abstract line5-15), including a flyback transformer (column 7, line 15-20), switching circuit (figure 1, item Q100), ON/OFF cycle (column 5, line 60-65), a voltage control, means for receiving input voltage (column 10, line 40-55), an under voltage lockout (column 10, line 1-25), second and third switching device (figure 1, item U100 and Q101), an amplifier (column 10, line 50-65), a MOSFET (figure 1, item

Art Unit: 2838

Q100, bipolar transistor (figure 1, item Q101), a comparator (column 8, line 25-45).

5. Claim 5-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Brewer et al. (U. S. Patent # 4,860,185).

Brewer et al.'s figure 2-9 and 14, discloses all claimed subject matters, a DC/DC converter flyback transformer, switching device, a voltage control circuit, an under voltage lockout (column 8, line 25-30), a feedback voltage (column 16 and 29 line 10-50), the second switching device (figure 6), an operational amplifier (column 26, line 55-70).

6. Claim 1-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Yan. (U.S. Patent # 5,657,220).

Yen discloses claimed invention (figure 2A-B), including DC/DC converter, a flyback converter, buck regulator, a flyback transformer, an ON/OFF controller, voltage sensor, and an operational amplifier, voltage divider, a MOSFET, a comparator,

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2838

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 43-46 and 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caruthers et al. (U.S. Patent # 6,466,469) in combination with Redl (U.S. Patent # 5,734,562).

Caruthers et al. disclose the claimed invention (figure 2), including a controller for providing PWM signals, the PWM signals to each power section being shifted $360/n$ from each other (Abstract line 1-7) and an auxiliary regulator to provide gate drive voltage (figure 2, item 22). However Caruthers et al. does not disclose the utilization of the buck topology in regulating the power converter. Redl teaches the utilization of the similar technique for regulation (column 1, line 35-65). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Caruthers et al.'s converter circuit by utilizing the technique taught by Redl for the purpose of controlling the switching device open and close to increase the efficiency of the power converter.

8. Claims 39-40,43-47 and 49-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Umminger et al. (U.S. Patent # 6,476,589) in combination with Redl (U.S. Patent # 5,734,562).

Art Unit: 2838

Umminger et al. discloses claimed invention (figure 3A-B and 4), except the utilization of technique for a flyback transformer with primary and secondary windings. Redl teaches the utilization of similar technique for a flyback transformer (figure 3a-c). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Umminger et al.'s converter circuit by utilizing the technique taught by Redl for the purpose of protecting circuit elements.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

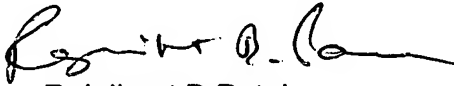
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 2838

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rajnikant B Patel whose telephone number is 571-272-2082. The examiner can normally be reached on 6.30-5.00; m-f.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on 571-272-2084. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Rajnikant B Patel
Primary Examiner
Art Unit 2838
